

Serial No. 09/919,192  
Amdt. Dated March 13, 2006  
Reply to Office Action of December 29, 2005

### **REMARKS/ARGUMENTS**

Prior to this Amendment, claims 1-7, 9-11, and 17-20 were pending in this application.

Claims 1, 7, and 17 are amended to correct claim language objections to more clearly claim the subject matter of the invention.

After entry of the Amendment, claims 1-7, 9-11, and 17-20 remain for consideration by the Examiner.

### **Review Prosecution Progress**

The December 29, 2005 Office Action is a first Office Action after Applicants filed an Appeal Brief on October 12, 2005. The December 29, 2005 Office Action does not cite any new references in rejecting all the claims, but it states that new grounds of rejections are being presented.

One of the new rejections is an indefiniteness rejection of claims 1-7, 9-11, and 17-20. These claims were not amended in the last Amendment filed on July 17, 2005, and the language that the Examiner now finds indefinite should have been objected to long before Applicants filed an Appeal Brief.

Another one of the "new" rejections involves the use of a reference that had previously been cited as a secondary 35 U.S.C. §103 reference (i.e., the Axberg reference) as now supporting a 35 U.S.C. §102 reference (even though the claims have not been amended to broaden their scope). The Axberg reference has been cited in conjunction with several other primary references beginning with the June 28, 2004 Office Action. Applicants have shown in each of their responses why the Axberg reference did not support a rejection of the claims even when combined with several differing primary references. Therefore, It is difficult to understand why the application was pulled out of the appeal process when no new references are cited in this Office Action. The appeal process prior to this Office Action would have involved comparing Axberg to the claim limitations and after this Office Action, an appeal will still involve comparing Axberg to the claim limitations (how is the Office furthering progress or better defining the arguments/rejections in the case?).

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### **Rejections of Claims Under 35 U.S.C. §112**

In the Office Action, the Examiner rejected claims 1-7, 9-11, and 17-20 under 35 U.S.C. §112, second paragraph, as being indefinite. Independent claims 1, 7, and 17 are amended to address this rejection.

### **Rejections of Claims Under 35 U.S.C. §102**

In the December 29, 2005 Office Action, claims 1, 4, 5, 7, 9-11, and 17-20 under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 6,009,466 ("Axberg"). This rejection is traversed based on the following remarks.

Claim 1 is directed to a remote configuration computer system that includes a storage management host installed in a client data storage system. The data storage system has a first configuration, and the storage management host provides remote access and a communication link to the master storage unit and host of the data storage system. The system further comprises a reconfiguration center located remote to the storage management system. The reconfiguration center **receives a reconfiguration request and in response transfers a logical implementation "selected or created based on the reconfiguration request and the first configuration" to the client data storage system "via the storage management host."** Axberg fails to teach or suggest a system for remote reconfiguring of a data storage system as called for in claim 1, and Applicants request that this rejection be withdrawn.

Axberg shows in Figure 1 a data storage system, e.g., similar to the client data storage system (or an embodiment of such a system) 110 in Applicants' Figure 1. As described at the cited col. 4, lines 2-55 and particularly at about lines 29 and 40 Axberg teaches that element 110 is a "host" that manages the storage network, which is similar to the hosts 154, 156, 166 of Applicants' Figure 1. Hence, Axberg does not show reconfiguration center of claim 1 that is remotely located relative to the storage system and that is communicatively linked to a storage management host. In other words, the host 110 of Axberg cannot be both the storage management host and the reconfiguration center of claim 1. Figure 3 is cited for

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showing the reconfiguration center but Figure 3 of Axberg is simply a block diagram of the host 110 of Figure 1. There is no teaching of two devices that are remotely located from each other (i.e., no host AND reconfiguration center). Hence, claim 1 is allowable over Axberg for this reason alone.

Additionally, Claim 1 calls for the remote reconfiguration center to receive a reconfiguration request from the client data storage system. The Office Action cites Axberg at col. 11, lines 1-18 for teaching a client initiated reconfiguration process. However, this description with reference to Figure 9 of Axberg is discussing how a user can operate the storage management program on the host 110 to configure the connected/managed storage network. There is no suggestion at this portion of Axberg of a remote reconfiguration center receiving a reconfiguration request from a client data storage system. Hence, Axberg fails to teach this limitation of claim 1.

Yet further, claim 1 calls for the logical implementation to be "selected or created based on the reconfiguration request and the first configuration." As there is no reconfiguration request the logical implementation in Axberg cannot be based on such a request. The logical implementation is also based on the first configuration. Axberg provides no teaching that it is useful or desirable to select or create a logical implementation defining a second configuration based on the first or existing configuration of its managed devices. The Office Action cites that abstract, col. 2, lines 30-66, col. 11, lines 14-16 for teaching this limitation. However, the abstract does not discuss generating a second configuration based on a first/existing configuration but instead discusses configuring "available hardware" of a network (e.g., setting a first/original configuration). At col. 2, lines 30-66, Axberg discusses the network configuration program used in the host to help a user configure a storage network, but, again, there is no discussion of doing this based on a first configuration (or on a reconfiguration request) but instead this is done based on a bus by bus process for available hardware. At col. 11, lines 14-16 Axberg discusses the use of a stored set of objects as a current management set, but there is no discussion that this describes the existing or first configuration of a client data storage system. Hence, the cited portions of Axberg fail to teach that

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the logical implementation is based both on the reconfiguration request and on the first or existing configuration of the client data storage system. For this additional reason, claim 1 is not anticipated by Axberg.

Claims 4 and 5 depend from claim 1 and are believed allowable for at least the reasons for allowing claim 1.

Claim 7 is directed to a method for remotely reconfiguring a data storage system that includes: monitoring a client data storage system, based on such monitoring transmitting a recommended reconfiguration for a monitored master storage unit, receiving a reconfiguration request, in response to the request determining the first configuration of the master storage unit, and then transferring a logical implementation for executing to reconfigure the master storage unit that is generated based on the reconfiguration request, the first configuration, and the results of the monitoring. Claim 7 has similar limitations to claim 1, but that are written in method form, and as a result, the reasons provided for allowing claim 1 over Axberg are believed applicable to claim 7.

Further, claim 7 calls for receiving a reconfiguration request and determining a first configuration of a master storage unit. Axberg fails to teach the receiving as discussed with reference to claim 1 and also, fails to teach the determining. The cited portions of Axberg discuss determining the available hardware of a storage network such as by a user selecting from lists but does not teach determining a first configuration of a master storage unit "with the remotely-located reconfiguration system" "in response to the receiving of the reconfiguration request."

Further, Axberg fails to teach "based on the monitoring, transmitting from the remotely-located reconfiguration system a recommended reconfiguration for the master storage unit to the client data storage system." Axberg teaches a program running on a host that allows a user to configure a storage network. There is no discussion of monitoring the storage network and then, based on that monitoring making a recommendation for a reconfiguration. The Office Action cites that abstract, which fails to discuss monitoring and then proactively making a recommendation as called for in claim 7. The Office Action also cites col. 7, lines

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2-35 of Axberg. At this citation, Axberg states that its preferred embodiment is for planning a configuration "before a storage network is constructed, i.e., physically connected together." In other words, Axberg is not teaching a reconfiguration tool but instead one for use in planning or originally configuring a storage system. Agents 431 can be used in some cases to gather existing network topology but this does not teach or suggest monitoring an operating client data storage system and based on that monitoring recommending a reconfiguration. For this additional reason, claim 7 is not anticipated by Axberg.

As with claim 1, claim 7 calls for transferring from a remotely-located reconfiguration system a logical implementation of a new or second configuration. In this case the configuration is sent to the storage management host, and as discussed with reference to claim 1, Axberg teaches that the host that manages the network also runs the configuration planning tool. Hence, Axberg cannot teach this limitation. Further, the logical implementation is generated "based on the reconfiguration request, the first configuration, and the results of the monitoring." As noted with reference to claim 1, Axberg fails to show that a configuration is generated based on a reconfiguration request or based on the first configuration. Further, Axberg fails to show reconfiguring based on results of monitoring.

Claim 9 depends from claim 7 and is believed allowable over Axberg at least for the reasons provided for claim 7. Further, claim 9 calls for determining a level of reconfiguration services and creating the logical implementation based on the identified level. Axberg fails to teach or suggest the utilization of levels of service with regard to generating reconfiguration logical implementations. Axberg is cited at col. 7, lines 2-24. However, at this citation, Axberg is discussing "agent portions 431" but is providing no teaching of a "level of configuration services and creating the logical implementation based on the identified level." The level of configuration services concept is described in detail beginning at page 14, line 29 of Applicants' specification, and this concept as described or as claimed in Claim 9 are not shown or suggested by Axberg. In Axberg a user can configure a network as they wish but there is no discussion of determining levels of reconfiguration services or

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generating a logical implementation of a reconfiguration of the storage devices based on such a level.

Claim 10 defines what is meant by "service level options" and depends from claim 9. Axberg fails to discuss such service level options in the abstract or in col. 1, lines 28-43 (which merely mentions RAID and other configurations without suggesting reconfiguring based on service level options). For these additional reasons, claims 9 and 10 are allowable over Axberg.

Referring to claim 17, this claim is directed to a method of remotely reconfiguring a data storage system. The method of claim 17 calls for a reconfiguration system to receive a reconfiguration request, to determine a first configuration of a data storage system associated with the request, to identify a "level of configuration services" for the data storage system, and to define a logical implementation for the data storage system based on the identified level of service and based on the first configuration. The logical implementation is then transferred to the storage management host installed on the data storage system and executed to reconfigure the master storage unit. The reasons provided for allowing claim 7 are believed applicable to claim 17.

Additionally, Axberg fails to show the feature of defining a logical implementation of a reconfiguration based on an identified level of service and on a first configuration as discussed with reference to dependent claim 9. The term "level of service" is defined in Applicants' specification at least in the paragraph beginning at page 15, line 12, and the use of such levels of service to determine/define how a system is to be reconfigured is not taught or suggested by Axberg. The Office Action cites that abstract for teaching this limitation, but the Axberg abstract is discussing the use of its configuration program to plan a configuration of storage network. There is no mention whatsoever of "levels of service" being linked to client data storage system and then using such a level of configuration services to create a logical implementation (that is also based on the first configuration). Hence, Axberg fails to teach each and every limitation of claim 17 as required under 35 U.S.C. §102.

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Claims 18-20 depend from claim 17 and are believed allowable for at least the reasons provided for allowing claim 17. Further, claim 18 defines what is meant by "service level options" and is believed allowable over Axberg for the reasons provided for allowing claim 10.

### **Rejections of Claims Under 35 U.S.C. §103**

In the Office Action, claims 2 and 3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Axberg in view of U.S. Pat. No. 5,151,895 ("Vacon"). Claims 2 and 3 depend from claim 1 and are believed allowable as depending from an allowable base claim. Further, Vacon fails to overcome the deficiencies of Axberg discussed above with reference to claim 1.

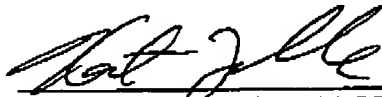
The Office Action also rejected claim 6 under 35 U.S.C. §103(a) as being unpatentable over Axberg and further in view of Official Notice. Claim 6 depends from claim 1 and is believed allowable as depending from an allowable base claim.

### **Conclusions**

Based on the above remarks, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

No fee is believed due for this submittal. However, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,



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